

Thallus effuse, much thicker than in the other varieties, pulverulent, almost tartareous, of a dirty-white, often tinged with tawny yellow (I could not detect any of the minute fibres mentioned by Acharius, L. Univ. 263), with numerous elevated black points or tubercles, the rudiments doubtless of the lirellæ, scattered irregularly. *Lirellæ* numerous, scattered, large, prominent, sessile, oblongo- or lineari-elongated, flexuose, more or less acuminate at the extremities, frequently also of the same width throughout, and with rather obtuse points, arranged by juxtaposition chiefly, sometimes by confluence into conspicuous stellate groups of three or more elongated flexuose rays. *Proper margins* thick, prominent, persistent, rounded and inflexed, more or less wavy. *Disk* expanded, according to age, either canaliculate and of uniform width throughout, or more or less dilated in the middle.

Specimens! *in herb.* Borrer from Acharius labelled "*Opegr. nimbosæ modifc.*;" from Schleicher labelled "*O. nimbosæ*," and "*O. phæa v. brunnea*;" and from Schærer labelled "*Opegrapha nimbosæ*," according to the form and septa of the sporidia, are all referable to this species. Schleicher's *O. phæa v. brunnea* and Schærer's *Opegrapha nimbosæ* are identical with each other, as is also *Opegrapha phæa*, Moug. and Nestl. Stirpes, 954!

PLATE V. fig. 9. Sporidia.

[To be continued.]

IX.—*Characters of a new European Pupa, and of a new Australian Bulimus.* By W. H. BENSON, Esq.

THE following very interesting *Pupa* being undescribed either in Pfeiffer's or Küster's works, and not being contained in Mortillet's recent Catalogue of the South-Western species of Europe, in which list a new *Helix* and a new *Bulimus*, from Nice and its neighbourhood, are enumerated, I am induced by its fortunate discovery, at an early period of my residence here, to lose no time in describing such an important acquisition to the Italian and European fauna. I take the opportunity of publishing at the same time a beautiful addition to the Australian *Bulimi* brought to England by Dr. J. F. Bacon, whose health, severely shaken by a tropical climate, has ultimately rendered necessary a premature return to his native land.

Pupa Rivierana, nobis, n. s.

Testa rimato-perforata, exacte cylindrica, diaphana, nitidula, fusco-cornea, minutissime oblique costulato-striata; sutura profunda,
Ann. & Mag. N. Hist. Ser. 2. Vol. xiii. 7

apice obtuso; anfractibus $6\frac{1}{2}$ convexis, ultimo $\frac{1}{4}$ totius longitudinis æquante; antice leviter ascendente, basi circa umbilicum vix compressiuscula; apertura truncato-ovata, 3-plicata, obliqua; peristomate simplici, disjuncto, acuto, albido, marginibus expansiusculis, exteriori superne valde arcuato, labio subreflexo; plica unica in medio parietis, columellari 1 obliqua obtusata brunnea, palatali 1 elongata, albida; extus sulcum efformante, omnibus profundis.

Long. 2, diam. $\frac{2}{3}$ mill.

Hab. in regione Riviera Pedemontana ad basin collium prope Nizza maritimam sub lapide.

In form, size and sculpture approaching most nearly to the edentate *P. minutissima*, but more slender than that species. It is singular that this beautiful little shell should have escaped the researches of Risso, none of whose doubtful species exhibit any approach to it.

It differs from *triplicata*, Studer, in its much smaller size, more slender cylindrical form and stronger sculpture, in the greater comparative size of the columellar plait, in the transverse position of the parietal plait, and the more deeply set palatal tooth, which in some aspects is not visible from the aperture. It is also deficient in the stricture and callus observable behind the outer lip in adult specimens of that species. As in *P. triplicata*, and partially in the South African *P. fontana*, the palatal tooth causes a furrow on the outside of the lower whorl. The costulæ are flattened and narrow, and the intercostal spaces double the breadth of the ribs.

It has a whorl more than *P. Ascaniensis*, A. Schmidt, is larger and more lengthened in form, the forms and proportions of the teeth differ, and its peristome, which is fully formed, has no resemblance to that of the Aschersleben species. The sculpture, moreover, is more delicate, and the whorls more ventricose than in Archdeacon Schmidt's late interesting addition to the German fauna.

In M. Albin Gras' Mollusca of the Department of the Isère, his figure of *P. muscorum*, Michaud, var. à deux dents, pl. 4. f. 18, from the Bastille near Guy Pâpe, approaches *P. Rivierana*. He notes one tooth on the columella (the plate shows it to be parietal), and one on the lower edge (the plate shows this to be within the outer lip near the base, not deeply placed in the centre of the lower whorl, as in *Ascaniensis* and *Rivierana*). In the description M. Gras makes no mention of the sculpture, and no striæ or costulæ are observable in the plate, while the obtuse plait on the columella of *P. Rivierana* appears also to be deficient. Pfeiffer and Küster both refer Michaud's *P. muscorum* to *minutissima*, together with Draparnaud's shell, in which that author notices a slight parietal plait. Risso's *P. muscorum* is

also referred, with a mark of doubt, to *P. minutissima*, but the size, the ivory peristome, and the angular plait (postice ad dextram) seem to identify his shell with *P. umbilicata*, which is not uncommon about Nice. Linnæus's prior name of *P. muscorum* being now by common consent attributed to *P. marginata*, Drap., the species intended by Draparnaud and his followers, whether referable to *minutissima* or to the species above described, can no longer bear the name assigned to them by those authors.

Küster notes as one of the characters which separate *P. umbilicata* from *P. Sempronii*, a species found at Bex and the Simplon, that the latter is deficient in the fold of the columella, which is always present in the other, to which he assigns the character "columella subplicata." Pfeiffer overlooks it altogether; it must however be confessed that ordinarily this plait is inconspicuous, and only to be observed when particular attention is directed to it. In one of my Nice specimens this feature is so strongly marked as to attract immediate notice.

[Note.—Specimens of *Pupa Rivierana* were collected by Mr. John Paget near Montpellier, quite identical with the Nice shell in habit, teeth, and columellar fold. They were by him referred to *P. minutissima*, although the parietal and palatal teeth had attracted his notice. The climate and situation of Montpellier are similar to those of Nice. I have found two specimens here, and Mr. Paget has since procured a third.—W. H. B. Jan. 10, 1854.]

Bulimus Baconi, nobis, n. s.

Testa perforata, globoso-ovata, tenui, pallida, castaneo-fusco-bifasciata, sericea, confertim striata, superne striis exilissimis decussata; spira conica, apice obtuso, papillari, sutura tenuiter crenulata; anfractibus 5 convexiusculis, ultimo inflato, dimidium testæ vix superante, bifasciato, fascia 1 superiori angusta, altera inferiori lata: apertura ovata, peristomate simplici acuto, margine columellari superne reflexiusculo.

Axis 23, diam. 15, alt. apert. 12, diam. 9 mill.

Hab. in Australia occidentali.

Found by Dr. Bacon in Darling's Range, six miles from Henley Park on the Avon River. In its transverse bands and colouring it differs from all the West Australian species, and inclines to the Tasmanian *B. Dufresnii*.

Nizza Maritima, December 1853.